

#2



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RAW SEQUENCE LISTING

DATE: 02/13/2002

PATENT APPLICATION: US/10/055,430

TIME: 19:32:52

Input Set : N:\Crf3\RULE60\10055430.txt

Output Set: N:\CRF3\02132002\J055430.raw

7 <110> APPLICANT: Rangel-Aldao, Rafael
 9 Bravo, Adriana
 11 Sanchez, Beatriz
 13 Galindo-Castro, Ivan
 17 <120> TITLE OF INVENTION: Malt Beverage Having Stabilized Flavor and Methods of
 Production
 19 Thereof
 23 <130> FILE REFERENCE: 1390.0070004
 29 <140> CURRENT APPLICATION NUMBER: 10/055,430
 32 <141> CURRENT FILING DATE: 2002-01-25
 34 <150> PRIOR APPLICATION NUMBER: 09/150,347
 36 <151> PRIOR FILING DATE: 1998-09-09
 40 <150> PRIOR APPLICATION NUMBER: 60/058,398
 43 <151> PRIOR FILING DATE: 1997-09-09
 52 <160> NUMBER OF SEQ ID NOS: 6
 58 <170> SOFTWARE: PatentIn Ver. 2.0
 64 <210> SEQ ID NO: 1
 67 <211> LENGTH: 400
 70 <212> TYPE: PRT
 73 <213> ORGANISM: Saccharomyces carlsbergensis
 78 <400> SEQUENCE: 1
 81 Met Ser Phe Val Lys Asp Phe Lys Pro Gln Ala Leu Gly Asp Thr Asn
 83 1 5 10 15
 85 Leu Phe Lys Pro Ile Lys Ile Gly Asn Asn Glu Leu Leu His Arg Ala
 87 20 25 30
 89 Val Ile Pro Pro Leu Thr Arg Met Arg Ala Leu His Pro Gly Asn Ile
 91 35 40 45
 93 Pro Asn Arg Asp Trp Ala Val Glu Tyr Tyr Thr Gln Arg Ala Gln Arg
 95 50 55 60
 97 Pro Gly Thr Met Ile Ile Thr Glu Gly Ala Phe Ile Ser Pro Gln Ala
 99 65 70 75 80
 101 Gly Gly Tyr Asp Asn Ala Pro Gly Val Trp Ser Glu Glu Gln Met Val
 103 85 90 95
 105 Glu Trp Thr Lys Ile Phe Asn Ala Ile His Glu Lys Lys Ser Phe Val
 107 100 105 110
 109 Trp Val Gln Leu Trp Val Leu Gly Trp Ala Ala Phe Pro Asp Asn Leu
 111 115 120 125
 113 Ala Arg Asp Gly Leu Arg Tyr Asp Ser Ala Ser Asp Asn Val Phe Met
 115 130 135 140
 117 Asp Ala Glu Gln Glu Ala Lys Ala Lys Lys Ala Asn Asn Pro Gln His
 119 145 150 155 160
 121 Ser Leu Thr Lys Asp Glu Ile Lys Gln Tyr Ile Lys Glu Tyr Val Gln
 123 165 170 175
 125 Ala Ala Lys Asn Ser Ile Ala Ala Gly Ala Asp Gly Val Glu Ile His

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127          180          185          190
129  Ser Ala Asn Gly Tyr Leu Leu Asn Gln Phe Leu Asp Pro His Ser Asn
131          195          200          205
133  Thr Arg Thr Asp Glu Tyr Gly Gly Ser Ile Glu Asn Arg Ala Arg Phe
135          210          215          220
137  Thr Leu Glu Val Val Asp Ala Leu Val Glu Ala Ile Gly His Glu Lys
139  225          230          235          240
141  Val Gly Leu Arg Leu Ser Pro Tyr Gly Val Phe Asn Ser Met Ser Gly
143          245          250          255
145  Gly Ala Glu Thr Gly Ile Val Ala Gln Tyr Ala Tyr Val Ala Gly Glu
147          260          265          270
150  Leu Glu Lys Arg Ala Lys Ala Gly Lys Arg Leu Ala Phe Val His Leu
152          275          280          285
154  Val Glu Pro Arg Val Thr Asn Pro Phe Leu Thr Glu Gly Glu Gly Glu
156  290          295          300
158  Tyr Glu Gly Gly Ser Asn Asp Phe Val Tyr Ser Ile Trp Lys Gly Pro
160  305          310          315          320
162  Val Ile Arg Ala Gly Asn Phe Ala Leu His Pro Glu Val Val Arg Glu
164          325          330          335
166  Glu Val Lys Asp Lys Arg Thr Leu Ile Gly Tyr Gly Arg Phe Phe Ile
168          340          345          350
170  Ser Asn Pro Asp Leu Val Asp Arg Leu Glu Lys Gly Leu Pro Leu Asn
172          355          360          365
174  Lys Tyr Asp Arg Asp Thr Phe Tyr Gln Met Ser Ala Trp Gly Tyr Ile
176  370          375          380
178  Asp Tyr Pro Thr Tyr Glu Glu Ala Leu Lys Leu Gly Trp Asp Lys Lys
180  385          390          395          400

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187 <210> SEQ ID NO: 2

190 <211> LENGTH: 400

193 <212> TYPE: PRT

196 <213> ORGANISM: *Saccharomyces carlsbergensis*

202 <400> SEQUENCE: 2

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205 Met Pro Phe Val Lys Asp Phe Lys Pro Gln Ala Leu Gly Asp Thr Asn
207 1          5          10          15
209 Leu Phe Lys Pro Ile Lys Ile Gly Asn Asn Glu Leu Leu His Arg Ala
211          20          25          30
213 Val Ile Pro Pro Leu Thr Arg Met Arg Ala Gln His Pro Gly Asn Ile
215          35          40          45
217 Pro Asn Arg Asp Trp Ala Val Glu Tyr Tyr Ala Gln Arg Ala Gln Arg
219          50          55          60
221 Pro Gly Thr Leu Ile Ile Thr Glu Gly Thr Phe Pro Ser Pro Gln Ser
223 65          70          75          80
225 Gly Gly Tyr Asp Asn Ala Pro Gly Ile Trp Ser Glu Glu Gln Ile Lys
227          85          90          95
229 Glu Trp Thr Lys Ile Phe Lys Ala Ile His Glu Asn Lys Ser Phe Ala
231          100          105          110
233 Trp Val Gln Leu Trp Val Leu Gly Trp Ala Ala Phe Pro Asp Thr Leu
235          115          120          125
237 Ala Arg Asp Gly Leu Arg Tyr Asp Ser Ala Ser Asp Asn Val Tyr Met

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239      130      135      140
241 Asn Ala Glu Gln Glu Glu Lys Ala Lys Lys Ala Asn Asn Pro Gln His
243 145      150      155      160
245 Ser Ile Thr Lys Asp Glu Ile Lys Gln Tyr Val Lys Glu Tyr Val Gln
247      165      170      175
249 Ala Ala Lys Asn Ser Ile Ala Ala Gly Ala Asp Gly Val Glu Ile His
251      180      185      190
253 Ser Ala Asn Gly Tyr Leu Leu Asn Gln Phe Leu Asp Pro His Ser Asn
255      195      200      205
257 Asn Arg Thr Asp Glu Tyr Gly Gly Ser Ile Glu Asn Arg Ala Arg Phe
259      210      215      220
261 Thr Leu Glu Val Val Asp Ala Val Val Asp Ala Ile Gly Pro Glu Lys
263 225      230      235      240
265 Val Gly Leu Arg Leu Ser Pro Tyr Gly Val Phe Asn Ser Met Ser Gly
267      245      250      255
269 Gly Ala Glu Thr Gly Ile Val Ala Gln Tyr Ala Tyr Val Leu Gly Glu
271      260      265      270
273 Leu Glu Arg Arg Ala Lys Ala Gly Lys Arg Leu Ala Phe Val His Leu
275      275      280      285
277 Val Glu Pro Arg Val Thr Asn Pro Phe Leu Thr Glu Gly Glu Gly Glu
279      290      295      300
281 Tyr Asn Gly Gly Ser Asn Lys Phe Ala Tyr Ser Ile Trp Lys Gly Pro
283 305      310      315      320
285 Ile Ile Arg Ala Gly Asn Phe Ala Leu His Pro Glu Val Val Arg Glu
287      325      330      335
289 Glu Val Lys Asp Pro Arg Thr Leu Ile Gly Tyr Gly Arg Phe Phe Ile
291      340      345      350
293 Ser Asn Pro Asp Leu Val Asp Arg Leu Glu Lys Gly Leu Pro Leu Asn
295      355      360      365
297 Lys Tyr Asp Arg Asp Thr Phe Tyr Lys Met Ser Ala Glu Gly Tyr Ile
299      370      375      380
302 Asp Tyr Pro Thr Tyr Glu Glu Ala Leu Lys Leu Gly Trp Asp Lys Asn
304 385      390      395      400
313 <210> SEQ ID NO: 3
316 <211> LENGTH: 400
319 <212> TYPE: PRT
322 <213> ORGANISM: Saccharomyces carlsbergensis
328 <400> SEQUENCE: 3
332 Met Pro Phe Val Lys Gly Phe Glu Pro Ile Ser Leu Arg Asp Thr Asn
334 1      5      10      15
336 Leu Phe Glu Pro Ile Lys Ile Gly Asn Thr Gln Leu Ala His Arg Ala
338      20      25      30
340 Val Met Pro Pro Leu Thr Arg Met Arg Ala Thr His Pro Gly Asn Ile
342      35      40      45
344 Pro Asn Lys Glu Trp Ala Ala Val Tyr Tyr Gly Gln Arg Ala Gln Arg
346      50      55      60
348 Pro Gly Thr Met Ile Ile Thr Glu Gly Thr Phe Ile Ser Pro Gln Ala
350      65      70      75      80
352 Gly Gly Tyr Asp Asn Ala Pro Gly Ile Trp Ser Asp Glu Gln Val Ala

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354          85          90          95
356      Glu Trp Lys Asn Ile Phe Leu Ala Ile His Asp Cys Gln Ser Phe Ala
358          100          105          110
360      Trp Val Gln Leu Trp Ser Leu Gly Trp Ala Ser Phe Pro Asp Val Leu
362          115          120          125
364      Ala Arg Asp Gly Leu Arg Tyr Asp Cys Ala Ser Asp Arg Val Tyr Met
366          130          135          140
368      Asn Ala Thr Leu Gln Glu Lys Ala Lys Asp Ala Asn Asn Leu Glu His
370          145          150          155          160
372      Ser Leu Thr Lys Asp Asp Ile Lys Gln Tyr Ile Lys Asp Tyr Ile His
374          165          170          175
376      Ala Ala Lys Asn Ser Ile Ala Ala Gly Ala Asp Gly Val Glu Ile His
378          180          185          190
380      Ser Ala Asn Gly Tyr Leu Leu Asn Gln Phe Leu Asp Pro His Ser Asn
382          195          200          205
384      Lys Arg Thr Asp Glu Tyr Gly Gly Thr Ile Glu Asn Arg Ala Arg Phe
386          210          215          220
388      Thr Leu Glu Val Val Asp Ala Leu Ile Glu Thr Ile Gly Pro Glu Arg
390          225          230          235          240
392      Val Gly Leu Arg Leu Ser Pro Tyr Gly Thr Phe Asn Ser Met Ser Gly
394          245          250          255
396      Gly Ala Glu Pro Gly Ile Ile Ala Gln Tyr Ser Tyr Val Leu Gly Glu
398          260          265          270
400      Leu Glu Lys Arg Ala Lys Ala Gly Lys Arg Leu Ala Phe Val His Leu
402          275          280          285
404      Val Glu Pro Arg Val Thr Asp Pro Ser Leu Val Glu Gly Glu Gly Glu
406          290          295          300
408      Tyr Ser Glu Gly Thr Asn Asp Phe Ala Tyr Ser Ile Trp Lys Gly Pro
410          305          310          315          320
412      Ile Ile Arg Ala Gly Asn Tyr Ala Leu His Pro Glu Val Val Arg Glu
414          325          330          335
416      Gln Val Lys Asp Pro Arg Thr Leu Ile Gly Tyr Gly Arg Phe Phe Ile
418          340          345          350
420      Ser Asn Pro Asp Leu Val Tyr Arg Leu Glu Glu Gly Leu Pro Leu Asn
422          355          360          365
424      Lys Tyr Asp Arg Ser Thr Phe Tyr Thr Met Ser Ala Glu Gly Tyr Thr
426          370          375          380
428      Asp Tyr Pro Thr Tyr Glu Glu Ala Val Asp Leu Gly Trp Asn Lys Asn
430          385          390          395          400
438 <210> SEQ ID NO: 4
441 <211> LENGTH: 30
444 <212> TYPE: PRT
447 <213> ORGANISM: Saccharomyces carlsbergensis
453 <400> SEQUENCE: 4
456      Met Pro Phe Val Lys Asp Phe Lys Pro Gln Ala Leu Gly Asp Thr Asn
458          1          5          10          15
460      Leu Phe Lys Pro Ile Lys Ile Gly Asn Asn Glu Leu Leu His
462          20          25          30
470 <210> SEQ ID NO: 5

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Input Set : N:\Crf3\RULE60\10055430.txt

Output Set: N:\CRF3\02132002\J055430.raw

473 <211> LENGTH: 25
476 <212> TYPE: DNA
479 <213> ORGANISM: Artificial sequence
486 <220> FEATURE:
488 <223> OTHER INFORMATION: Description of artificial sequence: synthetic
oligonucleotide
494 <400> SEQUENCE: 5
497 ggaattcatg ccatttggtta aggac 25
506 <210> SEQ ID NO: 6
509 <211> LENGTH: 25
512 <212> TYPE: DNA
515 <213> ORGANISM: Artificial sequence
522 <220> FEATURE:
524 <223> OTHER INFORMATION: Description of artificial sequence: synthetic
oligonucleotide
530 <400> SEQUENCE: 6
533 ctctagatta gagcttcttc gtacg 25

VERIFICATION SUMMARY

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Output Set: N:\CRF3\02132002\J055430.raw